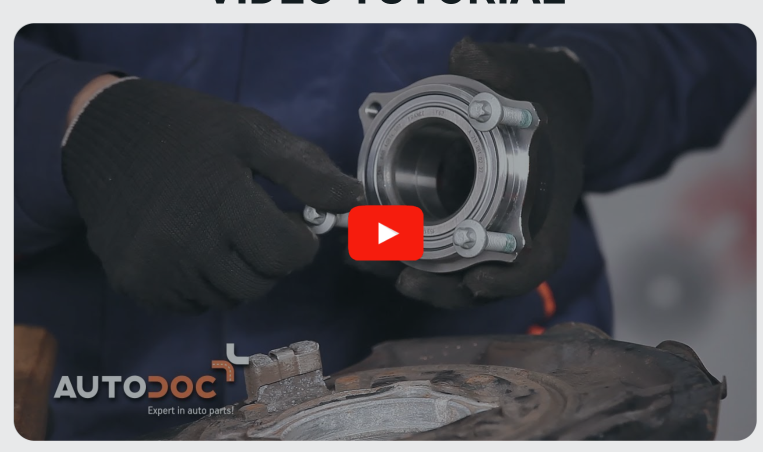
AUTODOC CLUB

How to change rear wheel bearing on **Mercedes W211** – replacement guide





VIDEO TUTORIAL



Important!

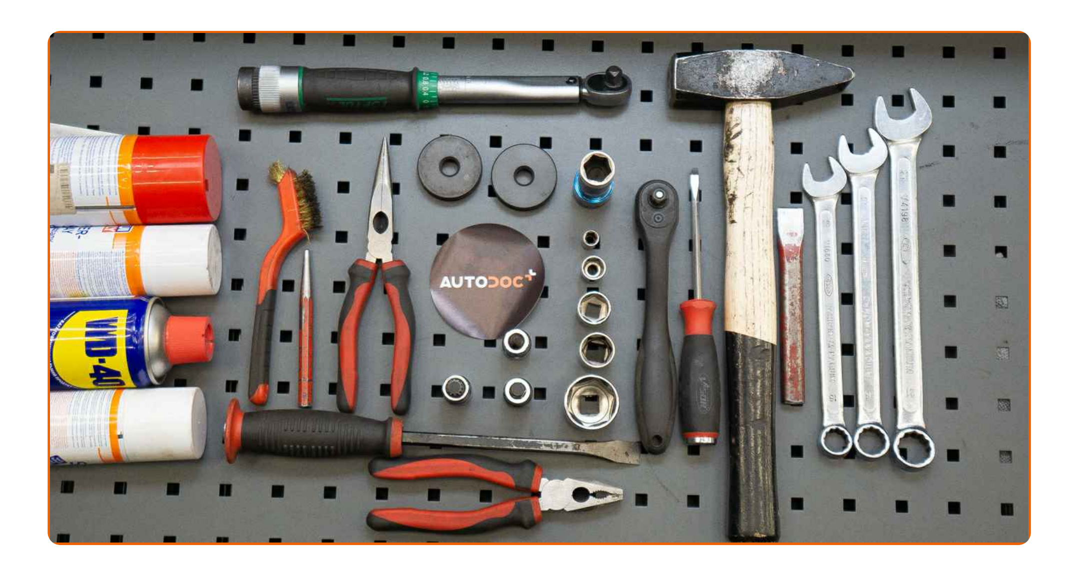
This replacement procedure can be used for:
MERCEDES-BENZ S-Class Saloon (W221) S 400 Hybrid (221.095, 221.195), MERCEDES-BENZ S-Class Saloon (W221) S 250 CDI (221.003, 221.103), MERCEDES-BENZ S-Class Saloon (W221) S 350 BlueTec (221.026, 221.126), MERCEDES-BENZ S-Class Saloon (W221) S 350 BlueTEC 4-matic (221.083, 221.183), MERCEDES-BENZ S-Class Saloon (W221) S 350 CGI (221.057, 221.157), MERCEDES-BENZ S-Class Saloon (W221) S 350 CGI 4-matic (221.082, 221.182), MERCEDES-BENZ S-Class Saloon (W221) S 500 CGI (221.073, 221.173), MERCEDES-BENZ S-Class Saloon (W221) S 500 CGI 4-matic (221.094, 221.194), MERCEDES-BENZ S-Class Saloon (W221) S 63 AMG (221.074, 221.174), MERCEDES-BENZ S-Class Saloon (W221) S 65 AMG (221.179), MERCEDES-BENZ E-Class Saloon (W212) E 250 CDI / BlueTEC 4-matic (212.082, 212.097), MERCEDES-BENZ E-Class Saloon (W212) E 300 CDI / BlueTEC (212.020, 212.021, 212.027), MERCEDES-BENZ E-Class Saloon (W212) E 350 CDI (212.023), MERCEDES-BENZ E-Class Saloon (W212) E 350 CDI 4-matic (212.093), MERCEDES-BENZ E-Class Saloon (W212) E 200 NGT (212.041), (+ 143)

The steps may slightly vary depending on the car design.





REPLACEMENT: WHEEL BEARING – MERCEDES W211. LIST OF THE TOOLS YOU'LL NEED:



- Wire brush
- All-purpose cleaning spray
- WD-40 spray
- Brake cleaner
- Copper grease
- Combination spanner #16
- Combination spanner #18
- Combination spanner #21
- Drive socket # 8
- Drive socket # E12
- Drive socket # 16
- Drive socket # 18
- Drive socket # E18
- Drive socket # 32
- HEX bit no.H10.
- Torx bit M12
- Torx bit T30
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Hammer
- Flat chisel
- Pin punch
- Pliers
- Round-nose pliers
- Flat Screwdriver
- Bush and bearing driver set
- Crow bar
- Hydraulic transmission jack
- Wheel chock

BUY TOOLS





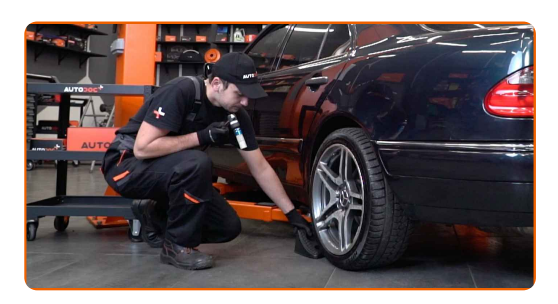


Replacement: wheel bearing – Mercedes W211. AUTODOC experts recommend:

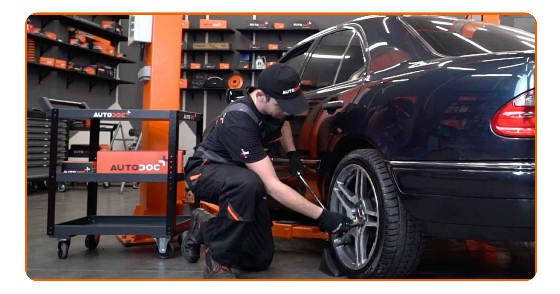
- Do not re-use the bearing assembly of your Mercedes W211 car.
- The wheel hub bearing replacement procedure is identical for both wheels on the same axle.
- All work should be done with the engine stopped.

REPLACEMENT: WHEEL BEARING – MERCEDES W211. USE THE FOLLOWING PROCEDURE:

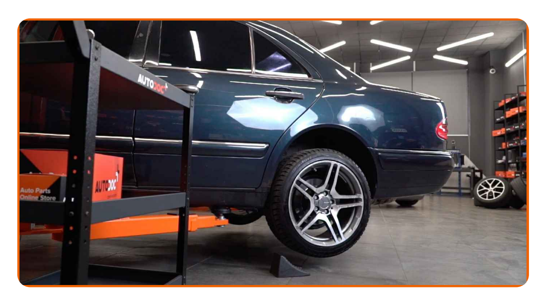
1 Secure the wheels with chocks.



2 Loosen the wheel mounting bolts. Use wheel impact socket #17.



3 Raise the rear of the car and secure on supports.







4 Unscrew the wheel bolts.



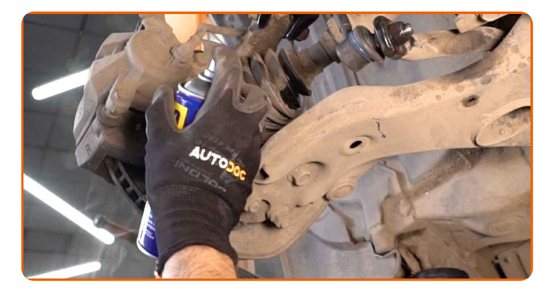
AUTODOC recommends:

- Important! Hold the wheel while unscrewing the fastening bolts. Mercedes W211

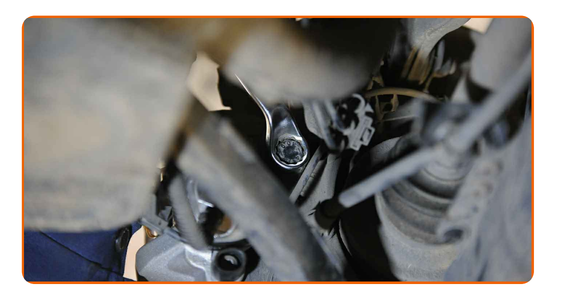
5 Remove the wheel.



6 Clean the brake caliper bracket fasteners. Use a wire brush. Use WD-40 spray.



7 Unscrew the caliper bracket fastening. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.







8 Remove the fastening bolts (2 pieces).

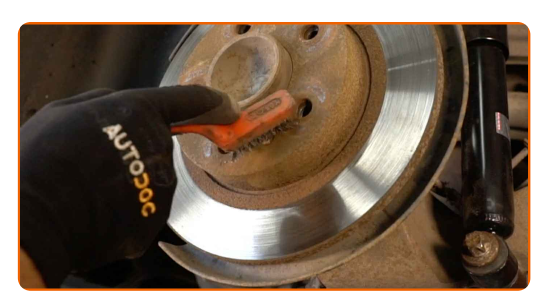
9 Remove the brake caliper together with its bracket.



Replacement: wheel bearing – Mercedes W211. Tip:

- Tie the caliper to the suspension or to the body with a wire without disconnecting from the brake hose to prevent depressurization of the brake system.
- Make sure that the brake caliper is not hanging on the brake hose.
- Don't press the brake pedal after the brake caliper has been removed. As a result, the piston can fall out from the brake cylinder, and brake fluid leakage and depressurization of the system may occur.
- Check the brake caliper bracket, brake caliper guide pins and boots. Clean them. Replace, if necessary.

10 Clean the brake disc fasteners. Use a wire brush. Use WD-40 spray.







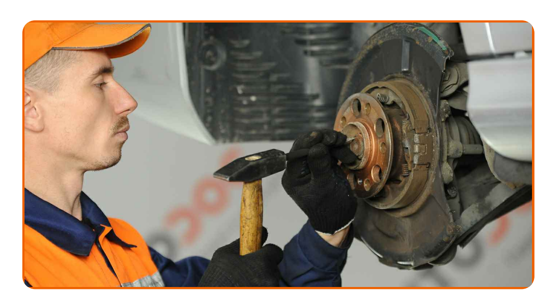
11 Unscrew the brake disc fastening. Use Torx T30. Use a ratchet wrench.



12 Remove the brake disc.



13 Unstake the wheel hub retaining nut. Use a flat metal-working chisel. Use a hammer.



14 Unscrew the wheel hub axle nut. Use a drive socket #32. Use a ratchet wrench.

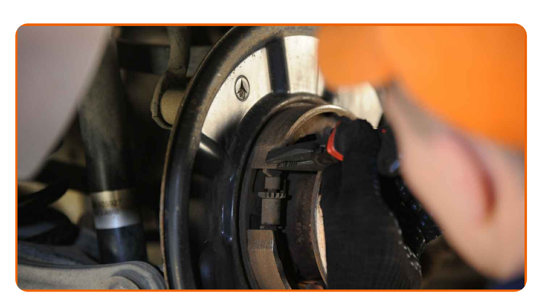


15 Remove the fastening nut.

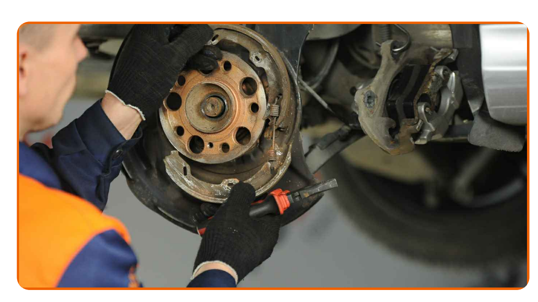




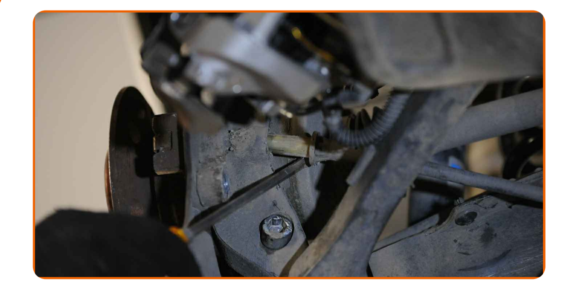
16 Remove the brake shoe adjuster. Use pliers. Use round-nose pliers. Use a flat screwdriver.



17 Dismantle the hand brake shoes together with the lower spring.



18 Disconnect the parking brake cable. Use a flat screwdriver.



19 Clean the control arm fasteners. Use a wire brush. Use WD-40 spray.

20 Unscrew the fastener connecting the control arm to the rear knuckle. Use a combination spanner #18. Use HEX No.H10. Use a ratchet wrench.

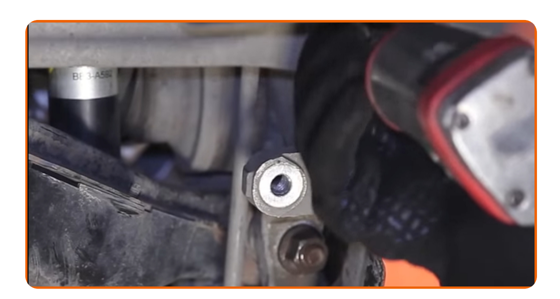


21 Remove the fastening bolt.



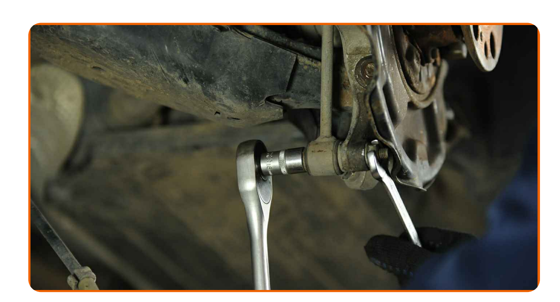


22 Detach the control arm.



23 Clean the stabiliser link fasteners. Use a wire brush. Use WD-40 spray.

24 Unscrew the stabilizer rod fasteners. Use a combination spanner #16. Use a drive socket #16. Use a ratchet wrench.

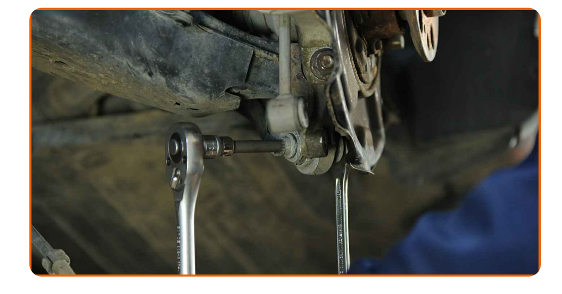


25 Remove the fastening bolt.



26 Remove the stabilizer rod.

27 Unscrew the fastener connecting the control arm to the rear knuckle. Use a combination spanner #18. Use Torx M12. Use a ratchet wrench.

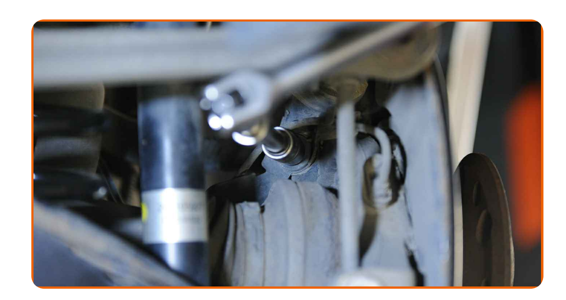


28 Remove the fastening bolt. Use Torx M12. Use a ratchet wrench.





29 Unscrew the upper control arm fasteners. Use a combination spanner #18. Use a drive socket #E18. Use a ratchet wrench.

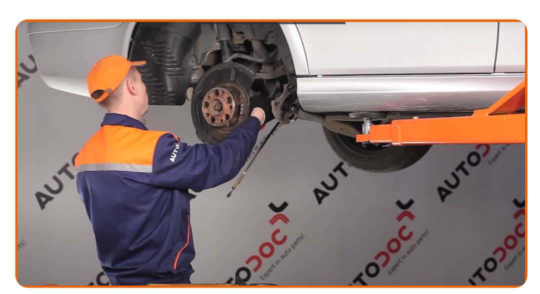


30 Remove the fastening bolt. Use a pin punch. Use a hammer.

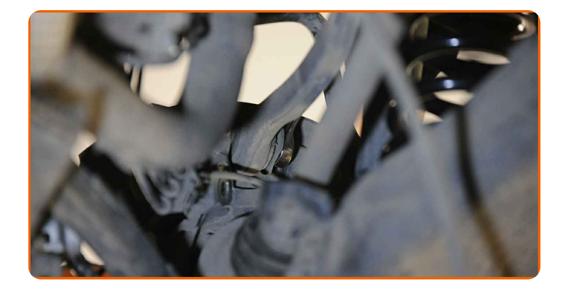


31 Detach the ABS wiring harness bracket.

32 Detach the control arm.



33 Unscrew the upper control arm fasteners. Use a combination spanner #18. Use a drive socket #E18. Use a ratchet wrench.



34 Remove the fastening bolt.

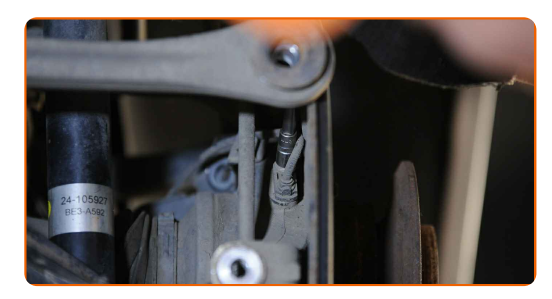
35 Detach the control arm.

36 Unscrew the fastener connecting the control arm to the rear knuckle. Use a combination spanner #21. Use HEX No.H10. Use a ratchet wrench.



37 Detach the control arm.

38 Unscrew the ABS sensor fastening from the steering knuckle. Use a drive socket #8. Use a ratchet wrench.



39 Disconnect the ABS sensor.



40 Remove the fastening bolt. Use a pin punch. Use a hammer.

41 Detach the driveshaft from the steering knuckle.







Replacement: wheel bearing – Mercedes W211. AUTODOC recommends:

- Make sure that the drive shaft is not unloaded (when the car is jacked).

42 Remove the steering knuckle together with the hub.

43 Remove the wheel hub from the steering knuckle. Use a bush and bearing driver set. Use a hammer.



44 Unscrew the hub bearing mounting. Use a drive socket #E12. Use a ratchet wrench.



45 Remove the hub bearing mounting. Use a hammer.

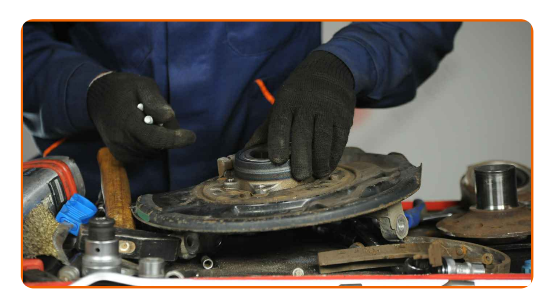






46 Clean the hub bearing mounting seat. Use a wire brush. Use WD-40 spray.

47 Install a new hub bearing and secure it.



48 Tighten the fastener of the wheel hub bearing. Use a drive socket #E12. Use a torque wrench. Tighten it to 80 Nm torque.

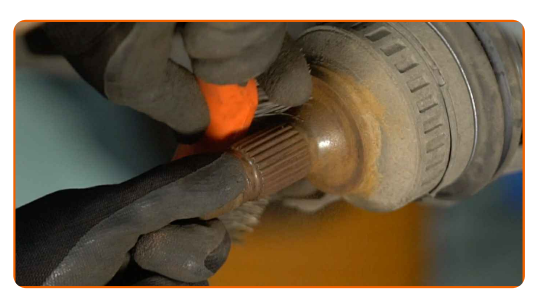


49 Treat the fasteners of the wheel hub bearing. Use copper grease.

50 Install the wheel hub on the steering knuckle. Use a bush and bearing driver set.



51 Clean the splines of the drive shaft CV joint. Use a wire brush. Use WD-40 spray.





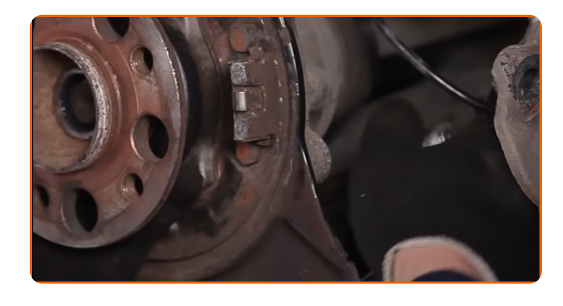


52 Install the steering knuckle with a hub in assembly.

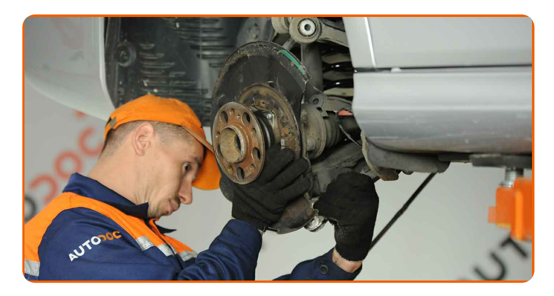


53 Mount the drive shaft into the wheel hub.

54 Install the fastening bolt. Use a hammer.

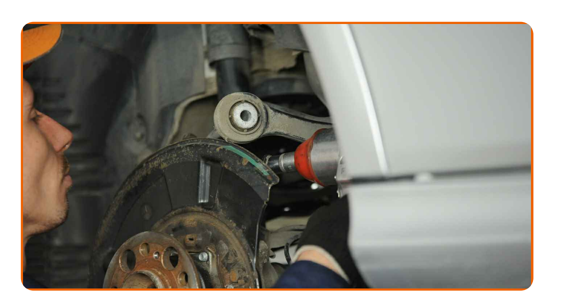


55 Attach the control arm.



56 Install the fastening bolt.

57 Tighten the upper control arm fasteners. Use a combination spanner #18. Use a drive socket #E18. Use a torque wrench. Tighten it to 80 Nm torque.+90°







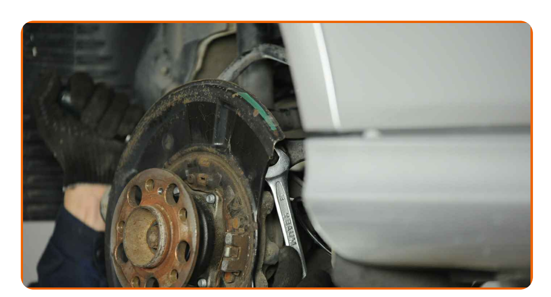
AUTODOC recommends:

- Important! Be sure to use new fasteners.

58 Fasten the ABS wiring harness bracket.

59 Attach the control arm.

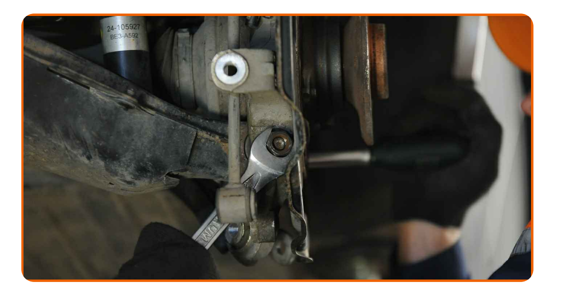
60 Tighten the upper control arm fasteners. Use a combination spanner #18. Use a drive socket #E18. Use a torque wrench. Tighten it to 80 Nm torque.+90°



AUTODOC recommends:

- Important! Be sure to use new fasteners.

61 Tighten the fasteners connecting the control arm to the rear knuckle. Use a combination spanner #21. Use HEX No.H10. Use a torque wrench. Tighten it to 80 Nm torque.+90°



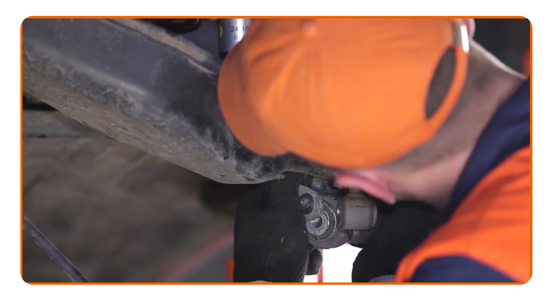




AUTODOC recommends:

- Important! Be sure to use new fasteners.

62 Attach the control arm. Use a crowbar.



63 Install the fastening bolt.

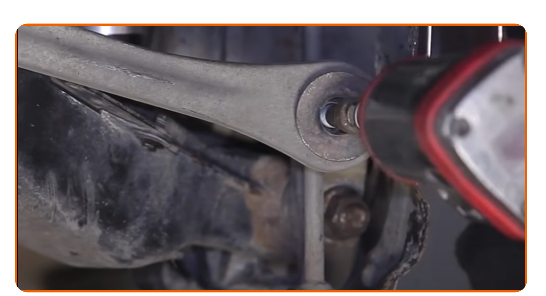
64 Screw in the fasteners connecting the control arm to the rear knuckle. Use Torx M12. Use a ratchet wrench.



65 Attach the control arm.

66 Install the fastening bolt.

67 Screw in the fasteners connecting the control arm to the rear knuckle. Use HEX No.H10. Use a ratchet wrench.







68

Prop up the steering knuckle. Use a hydraulic transmission jack.



69

Tighten the fasteners connecting the control arm to the rear knuckle. Use a combination spanner #18. Use HEX No.H10. Use a torque wrench. Tighten it to 80 Nm torque.+90°

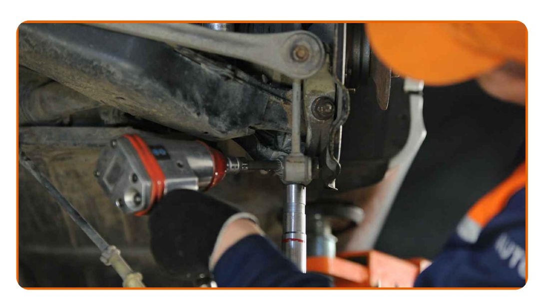


AUTODOC recommends:

- Important! Be sure to use new fasteners.

70

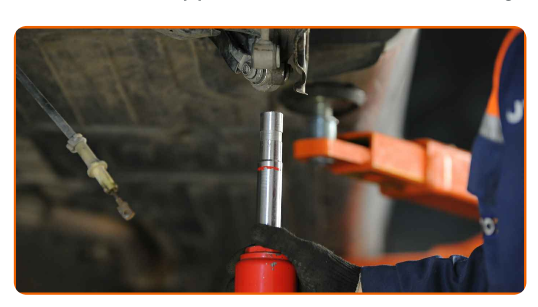
Tighten the fasteners connecting the control arm to the rear knuckle. Use a combination spanner #18. Use Torx M12. Use a torque wrench. Observe the recommended tightening torque.







71 Remove the support from under the steering knuckle.



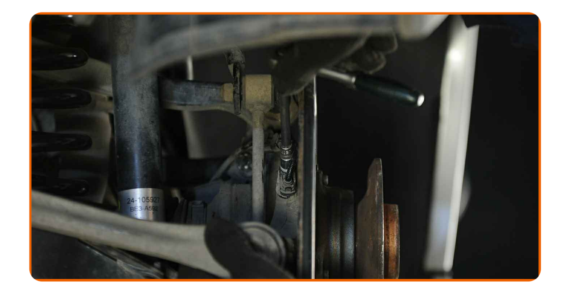
AUTODOC recommends:

- Replacement: wheel bearing – Mercedes W211. Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

72 Install the fastening bolt.

73 Connect the ABS sensor.

74 Screw in the fastener that connects the ABS sensor to the rear knuckle. Use a drive socket #8. Use a ratchet wrench.



75 Install the transverse stabilizer link.

76 Install the fastening bolt.

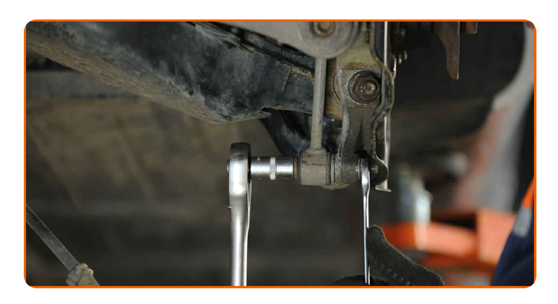






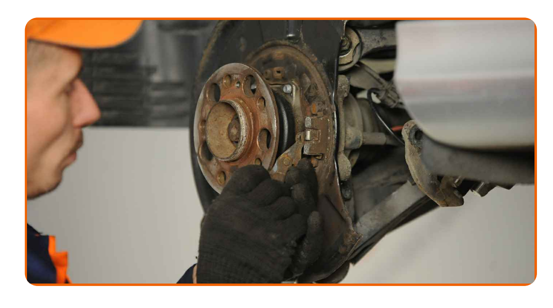
77

Tighten the stabiliser link fastener. Use a combination spanner #16. Use a drive socket #16. Use a torque wrench. Tighten it to 50 Nm torque.



78

Secure the parking brake cable.



79

Install the hand brake shoes together with the lower spring.

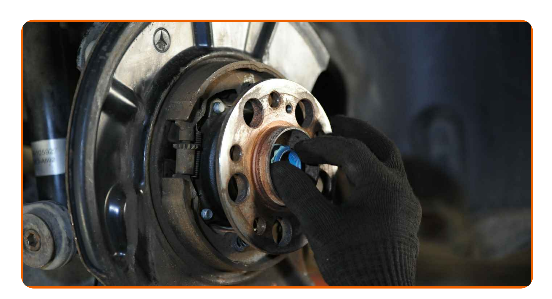


80

Insert the brake shoes adjusting mechanism. Use pliers. Use round-nose pliers. Use a flat screwdriver.



81 Install the fastening nut.



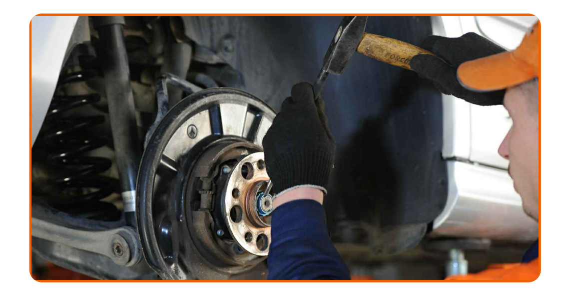
82 Tighten the hub. Use a drive socket #32. Use a torque wrench. Tighten it to 170 Nm torque.+45°



AUTODOC recommends:

- Important! Be sure to use new fasteners.

83 Restake the wheel hub retaining nut. Use a flat metal-working chisel. Use a hammer.



84 Install the brake disc.







85 Tighten the brake disc fastening. Use Torx T30. Use a torque wrench. Tighten it to 9 Nm torque.

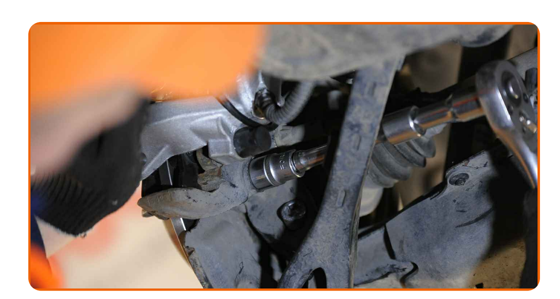


86 Install the brake caliper together with its bracket.



87 Install the fastening bolts (2 pieces).

88 Tighten the brake caliper bracket. Use a combination spanner #18. Use a drive socket #18. Use a torque wrench. Tighten it to 115 Nm torque.



89 Treat all joints of the arm. Treat all joints of the stabiliser link. Use copper grease.

90 Treat the surface where the brake disc contacts the wheel rim. Use copper grease.



91 Clean the brake disk surface. Use a brake cleaner.





Replacement: wheel bearing – Mercedes W211. Tip from AUTODOC:

- After applying the spray, wait a few minutes.

92

Install the wheel.



AUTODOC recommends:

- Important! Hold the wheel while screwing in the fastening bolts. Mercedes W211

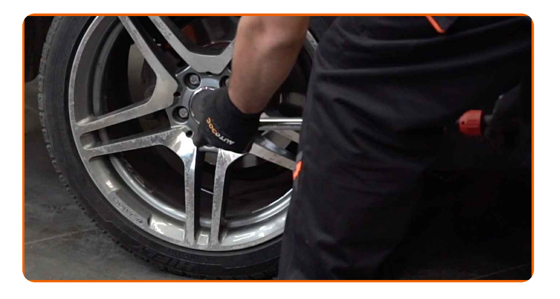
93

Screw in the wheel bolts. Use wheel impact socket #17.



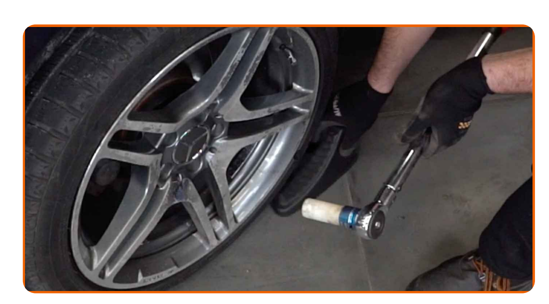
94

Lower the car and working in a cross order, tighten the wheel bolts. Use wheel impact socket #17. Use a torque wrench. Tighten it to 120 nm torque.



95

Remove the jacks and chocks.





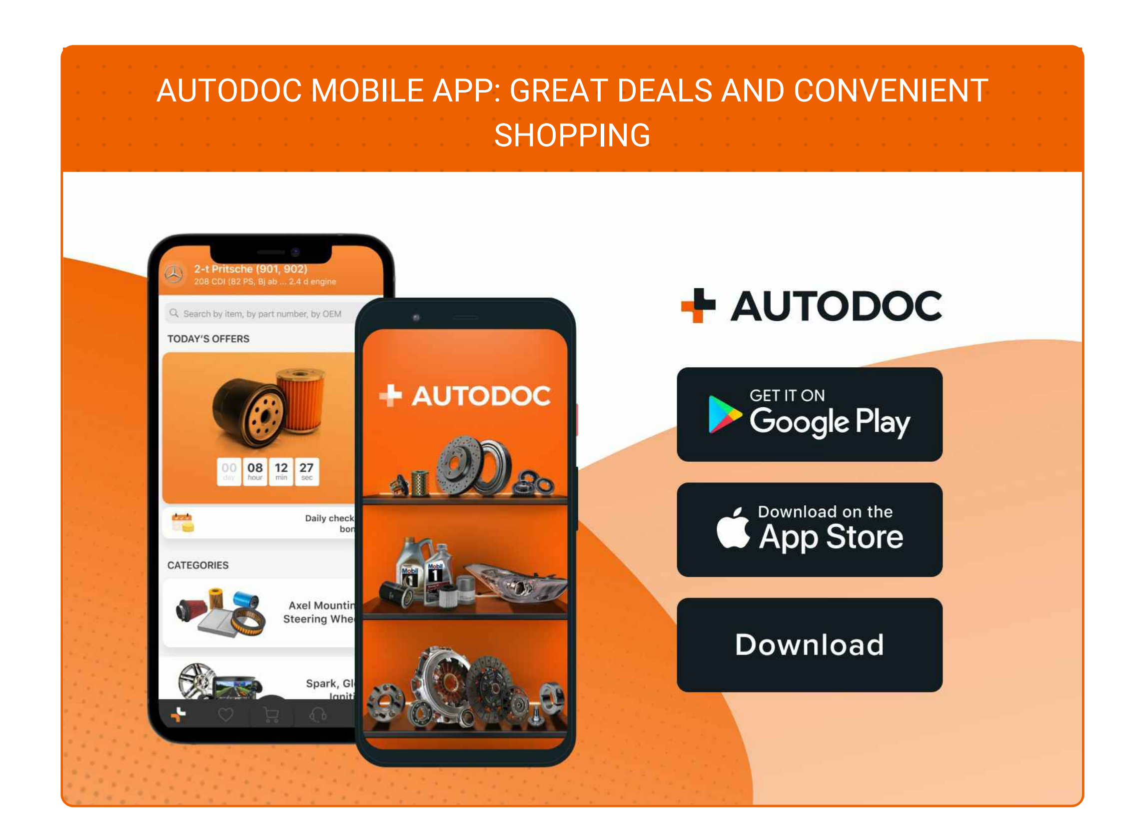






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